Fox, D N Naval Research Laboratory, Stennis Space Center, USA,
Gallacher, P Naval Research Laboratory, Stennis Space Center, MS, USA,
Warn-Varnas, A. Naval Research Laboratory, Stennis Space Center, MS, USA,
Broome, R Planning Systems Incorporated, Slidell, LA, USA,

CLUSTER-BASED CHARACTERIZATION OF OCEAN VARIABILITY

Acoustic propagation can be highly sensitive to specific features in the sound speed structure of the ocean. Short of in situ measurements, it can be useful to characterize an area based on historical and modeled profiles in an area to determine if there are a few dominant modes that occur and how often those modes occur. In many areas, in situ measured profiles are sparse or unavailable. Using measured profiles and certain derived parameters of acoustic relevance, we examine the resulting clusters and compare them with those derived from numerical ocean models and determine if the modes can be determined (or at least limited) using remote sensing.